THE GENESEE FARMER.

VOL. VIII. ROCHESTER, N. Y. MARCH 31, 1838. NO. 13.

PUBLISHED BY LUTHER TUCKER.

TERMS.—The Farmer is published every Saturday, making an annual volume of 416 pages, to which is added a Title-page and Index, at the low price of $2,50, or $2,00 if payment is made at the time of subscribing.

☞ All subscribers must commence with the volume, Jan. 1, or with the half volume, July 1. No subscription taken for less than six months.

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THE GENESEE FARMER.

SATURDAY, MARCH 31, 1838.

Mr. French's Queries—Corn, Spring Wheat, Lime.

We give the following extracts of a letter from Mr. B. F. FRENCH, a subscriber to the Genesee Farmer, and a practical farmer of skill and success, residing at Braintree, Mass. Mr. French is well known as a decided friend of agricultural improvement, and his efforts through the N. E. Farmer, and in other ways, have not been without their legitimate influence.

"Permit me to enquire of you what you call the earliest corn?—also is not the *Italian* and *Siberian* spring wheat the same? Is there any wheat you know of free free from blast or mildew? All we have here, is subject to it, Tea, Blacksea, and Gilliman.

"How should lime be applied to wheat crops? I am now carting lime, ashes, or the refuse, air slacked, from the city, a distance of ten miles, and housing it. The cost is five cents per bushel, cost of carting six cents. How many bushels to the acre, and how applied? The land is entirely destitute of lime, one mile from the sea, and of a rich black mould.

"P. S. We have with us the Canada corn; the yield is small. It will be of great service to the public to be informed of a corn as early as the Canada or earlier, and of a good yield."

The earliest variety of corn cultivated in this part of the country is now considered to be the Red Blaze. Next to this, the Canada, the Golden Sioux, and the Dutton, in the order named. Of the Red blaze a correspondent of the Farmer says,—

"It produces well, and has the desirable quality of ripening two weeks earlier than other kinds. It is usually eight rowed, long slim ears, kernel large in proportion to the cob, and the kernel mostly white. Some of the ears have streaks of red resembling a blaze of fire, hence its name. The meal made from it is of good quality."

Mr. Silas Gaylord of Skaneateles made an experiment with several varieties last year to ascertain their qualities, time of ripening, product, &c.

"The kinds are called the Red Blaze, White Flint, and Dutton. The seed was all planted at the same time, and in the same field. It was planted with a drill barrow in *triple rows*, leaving a space between every three rows of sufficient width for the cultivator. In ripening the Red Blaze was first; the White Flint about ten days later, and the Dutton about five days later still. In harvesting we measured one square rod of the Red Blaze, which yielded one bushel of shell corn. The same space of the White Flint gave two bushels and one peck of ears, which is something more than a bushel of corn. The Dutton we did not measure, but think the product fully equal to the White Flint."

We perceive that some farmers at the east consider the Dutton and the Golden Sioux as one and the same; but the experiments of Mr. Dodge, given in the 'Cultivator,' would show them to be decidedly different, as the last ripened ten or twelve days earlier than the former. The Red Blaze, as seen by Mr. Gaylord's experiment, is 15 days earlier than the Dutton; a difference of vast amount in our climate, and not unfrequently sufficient to determine the fate of the whole corn crop. We have raised excellent corn of the Canadian White Flint variety, but it must be planted much thicker than common corn, a practice easily permitted by its small sized stalks. Corn, if planted in drills, should have the rows running north and south, if the make of the ground will admit such an arrangement.

In Oneida county, where both the Italian and Siberian varieties of Spring wheat originated so far as this country is concerned, these wheats are considered distinct. The Italian was introduced some 7 or 8 years since by an Italian refugee, and was brought into notice by Mr. Hathaway of Rome, into whose hands the seed fell. The Siberian was brought from Switzerland about 4 years since, has proved an excellent variety, and has been principally brought into notice by Dr. Goodsell of Utica. Speaking of these wheats, Judge Buel says—"We have samples of both before us, and find there is a marked difference between the two. The Siberian is the largest berry and the dullest color. The Italian the smallest and brightest."

We perceive that some farmers in the eastern states speak of the Siberian wheat as a *bald wheat*. This must be some other variety, as in a letter from Dr. Goodsell of Utica, now lying before us, he describes the Siberian, at least the variety which has become so celebrated from his success in its culture, as a "bearded wheat, with the awns much longer than those of the common variety. * * * The chaff is white." And the English writers describe the Siberian as of a variety corresponding with the kind introduced by Dr. Goodsell. The varieties of wheat have a constant tendency to run into one another, and any number of beardless or bearded kinds may be grown without difficulty by care in selections or by crossing. We have now by us a sample of wheat grown from winter wheat prepared by freezing, and sown in the spring. The wheat was very pure white flint, but on springing up and earing, many ears were heavily bearded, while some retained the form of the original wheat. What further changes it will undergo, or whether as European authors assert, the product will be a genuine spring wheat, will be tested by this spring's sowing.

The use of lime in this part of the country is yet hardly commenced, the vast quantities of this invaluable mineral contained in our soils rendering its application comparatively of little moment. But the time has come when farms, not situated on the great limestone zone of Western New York, begin to feel the need of this stimulating manure, and the owners are turning their attention to its application and operation. Its benefits however are not to be questioned; and without its presence, in some form in the earth, the growth of wheat may be pronounced impossible.

In England, where the practice of liming land in connection with wheat, is carried to a greater extent than in any other country; the lime is usually applied in a quick or caustic state, and at the rate of from 100 to 400 bushels per acre. In the rotation of crops, the lime is put upon the land in the required quantity, and thoroughly incorporated with the surface; turneps are put on this land, wheat follows. Where the lime is already slacked, as in the case of old plaster from buildings, refuse lime, &c., it is applied at once to the soil, and immediately followed by the grain crop. On the grasses or grains, caustic lime in large quantities is apt to produce an injurious effect, but it developes the nutritive matter in the soil very rapidly, and as roots rarely suffer from an excess of nutriment or the action of the lime, the roots receive the first stimulus, and then when the lime has become n portial carbonate, is followed by wheat.

Experience in the use of lime shows that in whatever state it is applied, it should not be placed deep in the earth. The union with the surface soil should be complete, but it seems the most efficacious when in contact with the seeds, and besides, in cultivated soils, lime has a continual tendency to sink below the line where its presence is most needed.

On soils such as Mr. French describes his to be, if a crop of winter grain was to be taken, lime might be safely applied at the rate of 50 bushels an acre, slacked on the ground in small piles of a bushel or two each, covered with earth, and when reduced to powder, sprinkled or scattered on the land. For spring crops, where the grain was to be put in with the lime, a smaller quantity, would be sufficient, and, as it is with them a matter of experiment, we think by placing different quantities of lime on parts of the same field, and carefully noting the result, our New England friends would find a much surer guide to its application than the experience of any other section of country can afford.

Somewhat different opinions have been entertained as to the effect of mild lime, or lime which has lost its causticity after burning; some maintaining that all the benefit derived from its application is owing to its dividing the soils and rendering them more permeable to the roots of plants; while others have maintained that lime, after being calcined, acquires the power of combining with greater quantities of carbonic acid, than before, forming a hyper-carbonate. This is highly soluble in water and given off with avidity to plants, and in this way the lime in the structure of plants may perhaps be accounted for. This excess of carbonic acid is easily disengaged from its base (mild lime) with little increase of heat, and in union with water contributes materially to the growth of plants. The fermentation of manures in the earth liberates large quantities of this gas, and when lime is present its escape is arrested, and retained till demanded by the necessities of vegetation. This furnishes another reason why lime should always be kept near the surface. The direction of British Agriculturists is, to cover the lime completely, but with the lightest possible furrow. (Agricola and Mr. Pickering.) That mild or slacked lime produces more important effects than a simple division of the soil, is evident to us from its tendency to free foul lands and introduce a new class of plants, such as properly belong to calcareous soils. In short, mild lime is *always* advantageous on lands destitute of calcareous matter, and ultimately quick lime may be used with propriety. From the use of lime, our New England friends have reason to expect much, and we believe they will not be disappointed.

Mr. French inquires whether we know of any variety of wheat not subject to blast or mildew. We do not; though some varieties are less subject to disease than others. In this part of the country winter wheat rarely suffers from blight or mildew, unless it is previously winter killed. This was rendered very plain by an examination of the crops the last season. Fields that escaped the frosts of the spring unhurt, had mostly ripened their straw before the mildew made its appearance, and of course were uninjured. That which was made late, by being in a great degree a second growth, was much hurt, and some entirely destroyed. Spring wheat that was got in in season was scarcely touched, the straw coming in bright and clean, while that in which the ripening was delayed was much discolored and shrunk. The new varieties of spring wheat, the Italian and Siberian appear so far as we can learn to have suffered much less than the common kinds;—indeed Dr. Goodsell in a letter to us says—"So far as my experience for three seasons has gone, the Siberian wheat entirely resists rust and smut;—even when badly lodged the straw has been uniformly bright and lustrous." Of the winter wheats, the white flint has the most generally escaped the blight; and as the Siberian would seem to be adapted to a high country, or a low temperature, it is possible it may possess hardy qualities that enable it to resist causes that would be fatal, or at least decidedly injurious, to other or common varieties.

THE POTATO.

If the old world has given to the new, the invaluable grain plants, wheat, barley, and oats; the new has abundantly repaid the debt by returning in their stead, maize, or Indian corn, and the *Solanum tuberosum*, or common Potato. The potato is indeed mentioned by writers previous to the discovery of America, but the root alluded to is the sweet potato, a native of the East Indies, and early cultivated in the warmer parts of Europe. Thus

when Shakspeare makes that type of good living, the jolly Falstaff, exclaim, "Now, let the sky rain potatoes," we are not to infer that he had ever heard of 'Irish whites,' or that his aspirations extended to modern 'pink eyes.' The potato was early introduced from South America into Spain, but was brought from Virginia by Sir Walter Raleigh, and planted in Ireland, where it soon became a general favorite, and obtained the preference which it still maintains. In England, and Europe generally, it spread more gradually, and it is but a few years since its merits as an article of food were firmly established in France. The potato however seems destined to make the circuit of the globe, and as an article of food for man, it stands at the head of all roots, and not much inferior to the highest of all the cerealia, wheat. Perhaps there is no plant cultivated in the temperate latitudes from which so much food, per acre, adapted to the subsistence of man, can be procured, as from the potato. It is one of those plants, the introduction of which into a favorable climate, will enable a country to double its population, without materially trenching on their other means of subsistence.

The maize and the potato are striking examples of the effects produced on plants by acclimization and cultivation. Both are natives of the tropics, and both are now grown successfully in high northern latitudes; in their native warm climates the product of both is of an inferior quality, when compared with that produced within a few degrees of the utmost northern limit of their growth; examples of which may be seen in the corn of the southern States and the West Indies, and in the potatoes of the South American plains. Last year a quantity of the original plant was brought from Venezuela to London and carefully planted. The crop was a small inferior root, more resembling ground nuts than potatoes, or rather approaching the first year's growth of roots produced from the seeds of the potato apple.

In the cultivation of the potato the root or tuber is alone used for seed, as the plants from these are far more vigorous and productive than those grown from the true seed, or such as are found produced by the blossoms. For the producing new varieties, however, recourse is had to the apples, and the seed from these planted in beds will produce roots, from which new varieties, may be grown at pleasure, and it is in this way that most of the best modern sorts have been produced. To attempt to enumerate all the varieties known, would be a hopeless, not to say useless task; as more than 150 are enumerated in the Transactions of the Highland Society, many of which are only distinguished by such nice shades of difference as to be wholly overlooked by the common observer. In this country the number of varieties is scarcely less, though many of the names used evidently belong to the same variety. Colors, may be considered as forming the most distinguishing and permanent characteristic, though when grown from seeds, these are found blending in every shade and form. Most of our kinds have been introduced from England and Ireland, and hence partake of the qualities of those grown in those countries, though perhaps with a different name. In the British Husbandry the following six varieties are given as of superior quality, and the amount of each grown per acre as recorded by the Highland Society is as follows:—

Irish kidney pink-eyed,	363 bushels.
Dryden's white kidney,	302 "
American early white,	242 "
Ash-leaf round white,	363 "
London particular,	363 "
Prince of Wales,	484 "

Some potatoes are early, and some late; some mealy and some waxy; some pleasant to the taste, and some strong and disagreeable; some very productive and others not so; it is evident therefore that the kinds should be kept as distinct as possible, not because the roots will intermix, but because the several qualities are ripe at different periods, and are of very different values.

"The potato will grow upon almost any kind of soil, provided it be not *too wet and clayey;* but light, dry, friable loams, or sand of tolerable consistence, are the most appropriate." (Brit. Hus.) Swamps containing large quantities of vegetable matter, when well drained and reclaimed, are good for potatoes, and produce large crops. New lands that abound in "muck" are favorable to their growth; but on poor land of any kind, unless heavily manured, the potato will not succeed. As to the effect of potatoes upon the soil, and on the succeeding crops, recorded experiments are most contradictory. Considering the great quantity of nutritive matter it draws from the soil, it cannot—reasoning analogically—be viewed in any other light than as a serious drain upon the vegetative powers of the land. In England and Ireland, however, large quantities of the finest wheat are produced after the potato crop; but as this crop is usually heavily manured, and its culture requires a thorough moving of the soil in planting, hoeing, and gathering, it accounts for the success of the wheat, in defiance of the drain upon the soil by the potato. In this country, wheat rarely follows the potato, unless as a spring crop; and in this manner it usually succeeds well.

In this country, potatoes are almost invariably planted in hills; in England and Ireland in drills, or by dibbling. According to the Brit. Husbandry,

"The market gardeners and farmers of Essex, from which the London market is principally supplied, dibble in their sets, and a plan followed by men engaged in such large undertakings, is entitled to every degree of attention."

The ground is laid out in drills at the average distance of two feet, the surface being flat or ridged according to the nature of the soil. In Yorkshire the ground is ploughed into one bout ridges, and the sets or potatoes used for seed are laid by women and children in the furrows. The manure is laid in at the same time, and covered by the plough, dividing the ridge, and making a new one over the potatoes. Potatoes should be kept clean until the tops have a considerable size, when they overcome all weeds, and require no further attention till the time of gathering. Dunging in hills is also practiced in this country, and in most instances with success; but from some experiments made by the British Board of Agriculture, it appears that sets placed *over* the dung produced at the rate of five to four over those placed *under* the manure: Thus in an equal quantity of sets and manure, those laid over the manure gave 105 lbs. four ounces; under the manure 84 lbs. 3 ounces.

Few individuals in this country will be willing perhaps to undertake the production of new varieties from the seed, but for the benefit of such as may wish to do it, we condense from the account of Knight, the following description of the process. Select a few large ripe apples from a healthy plant, and preserve them in dry sand during the winter. The seeds from these apples are to be picked out, and sown in rich garden mould, as early as the springing plants will be safe from the frost. In the fall these seedlings will produce tubers, the largest and most promising of which are to be gathered for planting in the following spring. When the shoots rise a few inches above the ground they should be covered with mould, and then managed in the same manner as if grown from the old potato. The celebrated new variety, called the 'Downton yam potato,' white, mealy, and well flavored, and a good bearer, was in this way produced by Mr. Knight.

Various and conflicting opinions have been maintained as to the propriety of planting sets or cuttings, and whole tubers or roots, and the multitudes of experiments that have been made in this country and in England, seem to have left ample room in their results, for this difference of opinion. One of the most carefully conducted, and therefore the most satisfactory, of these recorded experiments, was that made by the London Horticultural Society with five different varieties; one half of the ground used being planted with whole tubers, and the other with sets containing but one eye each; and being placed at equal distances—18 inches apart—with the following result:

Species.	*Weight when taken up.* Whole tubers. Tons. cwt. lbs.	Single eyes. Tons. cwt. lbs.
Early Manly,	17 10 4	18 19 82
Shaws,	20 15 26	20 0 4
Red-nosed Kidney,	18 7 71	17 12 49
Pink-eyed Scotch,	22 15 83	20 2 7
Champion,	23 14 0	24 9 18

"The whole tubers appeared above ground in each instance three or four days earlier than the sets, and the haulm became somewhat longer; but the experiment shows that, although the total amount thus estimated to be obtained is,

	Tons.	cwt	lbs.
From whole tubers,	113	2	17
From single eyes,	111	3	54

Thus giving an apparent difference in five acres of about two tons, yet it was hardly more than the difference between the weight of the tubers and the sets originally planted."

According to Dr. Anderson and others, it requires in the drill method, if planted with sets, 20 bushels of seed to the acre, if with whole tubers, from 35 to 37 bushels. When planted in hills not more than one half of this quantity is usually put in, whether sets or whole tubers are used.

Early potatoes have always been very desirable, and when the root is cultivated for market, the profits on the early varieties far exceed those that come to maturity at a later period. In this country the *black mole nosed*, the *nutmeg*, and the *kidney buff*, are, we believe the most esteemed early kinds. But it should be remembered that a little attention to planting will make a difference of from ten to fifteen days in coming to maturity in almost any of the kinds usually planted. According to Loudon,

"In the western part of Lancashire the early potato is cultivated in warm situations, and brought to market at the end of May and during June. The cultivators, aware that the buds from the root and top end of the tuber germinate at different periods, assort their sets. Each potato is cut into five parts; the first or top set, that which contains the greatest number of shoots, is found to come to maturity a fortnight earlier than the cutting at the root end, and is always selected to produce the crop of early potatoes. The others ripen successively, the root set or cutting being the last, and producing a less quantity than the other sets."

The same result has been noticed in this country, and the fact should be more generally known. A correspondent of the Farmer and Gardener says:

"I caused a large square of ground to be prepared, in my garden, and laid out in four long beds, all well manured. In one of these beds I planted the top or crown of the potatoes, (Mercer variety,) in the next the sides, and in the two last the crowns and sides promiscuously. The crowns are all up and look very flourishing, being eight inches high. On examining the bed in which the sides were planted, I find them just sprouting, being about one inch from the bulb, but the surface of the ground having no appearance of vegetation whatever. The other two beds have come up as they were planted, promiscuously, presenting a very irregular appearance, some of the shoots being 8 inches high, while others have not yet made their way through the earth."

Another interesting experiment, to determine not only the comparative value of whole roots and cuttings for planting, but the most suitable distance for the sets, was conducted by Dr. Lindley, for the London Hort. Soc. with the following result:

Dist. between the rows. ft. in.	Sets.	Weight of seed required per acre. lbs.	Product per acre, deduct weight plant'd. tons	cwt.	lbs.
2 6...	Whole tubers,	6,497	18	8	4
	Single eyes,	1,470	15	19	82
2 0...	Whole tubers,	7,426	21	4	82
	Single eyes,	1,794	24	0	87
1 6...	Whole tubers,	11,764	21	4	72
	Single eyes,	2,055	22	16	102
0 6...	Whole tubers,	32,065	16	17	21
	Single eyes,	5,008	16	17	110

This experiment would seem to go far in determining two things, viz:—that sets were more valuable in comparison than tubers, and that the most proper distance of planting must be determined by the height to which the stems of the variety planted usually grow, which in this case was about two feet.

The crop of the potato, like all others subjected to field culture, varies much in productiveness. In England, the average, under their common system of farming, is stated to be from 200 to 250 bushels per acre, or from six to eight tons. Thirty-two bushels of 70 lbs. each are calculated as a ton, but heaped measure will sometimes weigh more. In the United States, the average crop cannot be stated higher than from 175 to 200 bushels per acre; a deficiency owing to our little manuring, late planting, and imperfect cultivation. Perhaps a majority of our farmers do not finish the field planting of potatoes until in the month of

June, while in England and Ireland, March and April are the months of planting. The consequence is, that many of our potatoes do not get ripe, the tops while in full vigor are killed by the frost, and watery, imperfect, and indigestible roots are the result. That this country is admirably adapted to the growth and perfection of the potato, is evident from the heavy crops that have been produced, where proper care has been given to the cultivation. The heaviest crops on record are those grown by Gen. Barnum of Vermont, (see Genesee Farmer, vol. 5, page 19 and 141,) which on a careful estimate and average of five pieces was 1,800 bushels; and he gives it as his opinion, that in good soils, and with his mode of culture, from 800 to 1000 bushels per acre may be safely calculated upon. From 500 to 700 bushels per acre have been, not unfrequently, grown by others, as the records of our agricultural societies can testify. Gen. Barnum's mode, after a thorough preparation of his land, is to plant in drills at the distance of 22 inches, and the sets in the drills 10 inches apart. The earth is hilled around the plants but once during the season, as there is much danger of disturbing the young tubers, or causing the formation of late new ones. But the great secret of his crops consists in bringing rich fresh earth, the scrapings of ditches or streets, earth from barn-yards or mould from swamps, and putting this earth for a top dressing on the plants. This is effected by the aid of a horse and cart, the horse traveling between the rows.

There is an opinion very prevalent among farmers, an erroneous one we think, that where tubers or sets of different varieties are planted indiscriminately, or even near each other in the same field, the product will be of a mixed character, a single root combining the colors and qualities of the varieties planted; or in other words, the new root is a genuine hybrid. Such an effect is physiologically impossible. The roots of a plant are not the *seeds;* and it is these alone that can feel the influence of the fecundating pollen distributed by the flowers. An apple blossom, impregnated as they usually are by the pollen from other blossoms, produces fruit proper to the tree, yet the seeds if sown will rarely produce trees resembling the parent; and no man would suppose, that because these apple *seeds* produced plants dis-similar to the parent tree, a sprout that should spring up from a root, as is sometimes the case, should be so likewise. The fact is, the propagation of the potato by the tubers and by the seeds, is an operation as distinct as the growth of the mulberry from cuttings and from the seed. The root, or the cutting, will invariably produce the same variety, but the seeds will not with certainty, unless the possibility of fecundation from other varieties is carefully guarded against.

There is also another point on which agriculturists are somewhat at variance; and that is, the propriety of cutting the stem of the potatoe before the root arrives at maturity. Gen. Barnum maintains, "that an early frost which nips the tops and destroys the vine, does not prevent the growth of the potatoe, and that such a notion ought to be exploded. On the contrary, if at this time it has not attained its full growth and weight, it grows more rapidly; the nourishment required for sustaining the top, being transferred to the root;" and he thinks that on this principle, the cutting of the haulm early would be beneficial to the crop of potatoes.

We think there must be a fallacy in this mode of reasoning. Numberless experiments, and the united opinion of all writers on vegetable physiology, go to establish the fact, that the farinaceous or nutritive matter of plants is prepared in the stem and leaves, and deposited in the receptacles which nature has provided, for instance, the kernel of wheat, and the tuber of the potato. If such is the case, the stem of the potato must be essential to its perfection; and this view of the matter is established by the fact, that when the root becomes ripe, the stem being no longer wanted for the purpose of preparing nutriment, perishes of itself. But in addition to the reasons here assigned, experiments have been instituted for the purpose of putting the question at rest. In the British Husbandry it is stated that,

"Cutting off the haulm or straw at different stages of its growth has been found to occasion a deficiency in the crop, in exact proportion to the earliness of the cutting. It was also prejudicial to the quality of the root; for the tubers continue to improve till the stems begin to decay, but become stationary the moment they are deprived of it, and consequently do not arrive to perfection either in size or nutritive properties. Thus by an experiment tried by Dr. Anderson, (and reported in the 4th vol. of the Bath Ag. Soc. papers,) upon plants upon which the stems were cut from the 2d of August to the 5th of Spetember; the loss in produce from the August cutting was very great; and that from the September cutting was calculated at not less than 93 bushels an acre. When the cutting is deferred until about the time the stems show symptoms of decay, it will probably do no harm to the roots, and an addition may thus be made to the value of the crop; but if done earlier, we apprehend there ean be no doubt that it will occasion a serious injury."

In the 2d vol. of the Farmer's Magazine, is the record of another experiment in cutting the tops, which showed a great deficiency in the crop, and the tubers were also ill ripened and of bad quality, where the ridges were cut, but where left untouched were excellent. In the Memoirs of the Board of Agriculture, Sir A. Grant states, that in his experiments "the cutting of the stems in every instance completely failed;" and a French writer of eminence says, that though the clustered sort of potato may be cut in September without injury, yet any other variety would suffer by it materially. In corroboration of these statements we may mention, that last season a heavy gust of wind blew down part of the fence that enclosed our garden lot, and gave admission to several cows. We had several beds of fine looking carrots, the tops very fresh and vigorous, and the greater part of these were eaten close to the ground. They sprung up again, but at the time of gathering there was a marked difference between the parts that had been topped, and those not touched, in favor of the latter. Some experiments have been made that seemed to be in favor of cutting potato tops, or at least that no injury resulted from the practice; but in these cases it is reasonable to suppose that the roots were so far advanced towards ripening, as not materially to be affected by the loss of the stems.

(*Conclusion next week.*)

Silk from Native Mulberries.

We give the following extract of a letter from I. Timmerman, Esq. of Fort Wayne, Indiana,—"I have seen no place where the Morus Multicaulis, or the white Italian Mulberry, grows so luxuriantly as here. I have about 30,000 trees of 3 and 5 years growth set in hedge form, and intend doing something in the silk business this season: and I wish to ascertain through the Farmer, if worms fed on leaves of the common black or red mulberry will produce good silk, as the banks of our rivers abound with these."

Worms fed on either the black or red native mulberry will make good silk, though it has been doubted by some whether it was quite equal in quality to that produced from the white, or the multicaulis; others have asserted the reverse. Probably the most serious difficulty in feeding worms from native mulberries would arise from gathering the leaves; there need be no apprehensions as to the silk. Some naturalists, we think, consider the *red* mulberry as our only native species, but the *black* which overspreads the whole west, has are undoubted right to the same distinction. The fact, that the red and the black both abound and flourish so luxuriantly in the Mississippi valley, is a conclusive proof of the adaptation of the country to the culture of silk.

To show that silk may be made from the native mulberry, we give the following notices. In 1734, the Gov. of Pennsylvania in a report, speaks of the culture of silk, and says 'the tree is natural in our soil, and the worm thrives well.' In 1770, a silk filature was established in Philadelphia. In 1771, 2,300 pounds of silk were reeled there. In 1770, a lady of Lancaster made a piece of Mantua silk of 60 yards from her own cocoons; and the Queen of England appeared in a court dress of this American silk. The earlier of these periods was before the introduction of the foreign mulberry; if the whole may not be considered so.

The following extract of a letter from the celebrated Du Ponceau of Phil. to a member of the Penn. Leg. will apeak for itself. "Dear Sir, I have received the sample of silk you had the goodness to send me, manufactured by a lady in the family of Mr. Oliver, Mercer co. It comfirms me in the opinion I have for several months entertained, that worms, fed on the *red* American mulberry will produce as fine silk as those fed on the white. I can see no difference in the appearance of the silks."

An article in the North Car. Spec. of 1836, says—"We have been presented with a quantity of silk both prepared in thread, and in a raw state, made near Franklin, Macon Co. It has a fine and beautiful appearance, and was produced from worms reared by a young lady only thirteen years of age. The specimen sent us, was from silkworms fed on leaves of the common indigenous *blaek* mulberry."

The editor of the American Farmer has been presented with half a dozen skeins of silk, made in Rockbridge, Virginia. The Ed. says—"We have called the silk excellent, by which we mean that it was perfectly evenly reeled, properly twisted, and not inferior in any quality, colours excepted, to any silk we every saw." The worms were fed on the native mulberries of the adjacent forests, red and black.

Such proofs might be multiplied, but these are sufficient to show that both the red and black mulberries of our country, will make first rate silk; and we shall be pleased to hear of the success of our western friends in this, to our country, most important business; of its profits to the individual there can be not a question.

Spring Wheat.

The attention of agriculturists has been drawn to this subject in consequence of the partial failure of our winter wheat crops, and the great success which has attended the culture of spring wheat for two or three years past; and in our opinion it deserves all the notice it has received. Millions of bushels were grown last year, and the quantity sown will be more than trebled the present season. There is a very large part of our country which is not adapted to the culture of winter wheat, unless an alteration of the nature of the soil is effected, by applying lime and sand, or marl, at an expenditure of money and labor, which few farmers are able or willing to encounter. On these soils wheat is apt to winter kill, or freeze out, they containing too much clay, and being of course too tenaceous of moisture. But on these soils, where ploughed in the fall, and subjected to the pulverizing effect of frosts, or even in the spring, when by situation or draining they are dry enough to admit the early action of the plough, spring wheat will succeed admirably. It is not because our clay, or as they are generally termed hardpan soils, are deficient in fertility, that winter wheat will not succeed on them; it is because of their adhesiveness; and when this is overcome the great difficulty is removed. In the case of spring wheat this objection loses its force in a great measure, and of course recommends itself to the special notice of the farmer. If, however, spring wheat is to be raised in perfection, pains must be taken not only to procure good seed, but to prepare it for sowing. Both Mr. Hathaway, in his paper on Italian wheat, and Dr. Goodsell, in his letter on the Siberian wheat, two of the most valuable varieties yet known in this country, strongly recommend pickling and liming before sowing. By brining properly, the oats which are apt to infest and lessen the value of spring wheat are separated, and the process of germination is advanced; and by liming all tendency to smut is prevented, as well as a most valuable stimulating manure, applied at the very point where it is most needed, and will be the most effective. The lime should be fresh, or caustic used for drying the wheat, and it should be sown immediately after being limed. No seed after being once soaked, should be allowed to dry before planting, and corn as well as wheat sometimes fails of vegetating from this cause.

Give hens burned bones, lime, gravel, &c. that they may have some material for forming egg-shells.

COMMUNICATIONS.

PROTECTION OF SHEEP.

Mr. Tucker—No matter connected with sheep husbandry, at least in the "Empire state," is so generally disregarded, and yet of paramount importance to the true interest of the wool-grower, as *protection of sheep during the winter season.*

The writer, as a representative of a recently deceased parent, will be obliged, in order to make the necessary statements, antecedent to that event, and connected with the subject, to use personal pronouns; the delicacy of so doing, is overcome by the great desire he feels to make widely known his experience of the benefits to be derived from adequate protection of sheep.

Until within the last three years, I have disregarded my own interest by allowing my flocks, as is usual, to be foddered about stacks without any protection from the pitiless storm; and when I recall their sufferings and death from exposure, it is really with shame and mortification that I make it known. Previous to the erection of shelters, the number of my sheep varied from 900 to 1400, and the loss every winter was from 70 to 150, depending upon the severity of the season. This was too aggravating, and besides, a violation of the common feelings of humanity; therefore, if possible, I resolved it should cease. Accordingly I set about building barns, varying in size 30 by 18 feet, and 36 by 20 feet, all with 14 feet posts, leaving an opening of 4½ feet from the ground, which forms the protecting apartment. I will here state, that the first size named are not sufficiently large to hold hay enough for 100 sheep, which is the greatest number I allow to herd in the winter; the last named are amply large, provided the hay is not of a very coarse description; and the accommodation or shed part, is also abundantly large for a flock of the above size. They all front the south, on which side are boards that are made to shove like bars, which, of course, are readily removed when the time arrives for carting away the manure, leaving a space, however, of 8 or 10 feet wide for them to pass in and out at pleasure. Those of my barns which stand on my meadows, are enclosed by board fences, made close, which, when the sheep are feeding, afford great protection from winds. Never having measured them, I am unable to state their dimensions, but 75 by 100 feet, is large enough.

I will here mention, that on one of my farms I have two barns constructed after the "Massachusetts mode," standing upon side hills, the inclination of which are such, that in order to form protecting apartments, it was only necessary to excavate the ground in the rear. The size of these barns are 36 by 45 feet, and therefore, by means of a division wall, afford ample accommodations for two flocks of 100 each. On three sides of each apartment are fixed *box racks*, in which the hay is deposited from above; this advantage, in cold or rainy weather, cannot be too highly appreciated. In regard to my other flocks, hay is fed to them in boxes, with openings at the sides and ends sufficiently wide for the admission of their heads. And here, my brethren wool-growers, be pleased to mark me—*if you wish your sheep to eat hay well and not waste, make use of boxes;* for my own part, such, I have discovered, is the economy, that I "veto" *slat racks*, or feeding on snow or ground. If any is left in the boxes, every morning it is taken out, put in a pen, which when full, is drawn away and fed to my cattle.

Raising a large crop of wheat yearly, I am supplied with a great abundance of straw; a goodly portion of which is used for littering the sheds and scattered about the yards,—much of it in cold weather sheep will eat; the residue is converted into manure. By the way, I think this a capital mode of disposing of surplus straw, as it is cut up by being constantly trampled upon, and thereby is fitted for immediate use without the delay of rotting; the difficulty of ploughing under long straw every practical farmer is fully aware.

But I will not further digress, but proceed to name some of the prominent advantages derived from protection, which my experience has confirmed.

To all my sheep, previous to the erection of my barns, I fed daily through the winter half a bushel of clean oats, or that quantity of oats and bran, to the hundred. Since then I have ceased graining, except to lambs, and *their condition has been, and now is, as good as when they were grained.* This fact I ascribe to two causes,—the first and most important is *protection*, for all experienced wool-growers are aware that exposure to severe cold and storms *impoverish*,—and second, the superior quality of hay secured in barns over that in stacks. Such is the injury which hay sustains by stacking, that an *honest man* once observed to me, after seeing how bright and sweet my barn hay was, "that the man (and it is possible it was father Adam) who *invented stacks* ought to have been gibbeted." The writer is not so much disposed to censure the *inventor* as those who follow his vicious example.

But the great advantage of protection *is the saving of life.*

I have already stated that my losses when my sheep were exposed, varied from 70 to 150, depending upon the mildness or severity of winter seasons. The severe winter of '35 and '36, very many wool-growers have sad cause to remember. That winter being the first my sheep were duly protected, my loss was 38 out of nearly 1600. In immediate contrast to this, I will record the loss, during the same winter, of some of my acquaintances in the adjoining county, Cayuga. One individual, from a flock of 1500, lost between 200 and 300—another from a flock of 2000, nearly 400—another from a flock of 1400, between 600 and 700—and the loss, with some exceptions, was nearly in this proportion throughout this region!!

Be it understood, that none of the individuals referred to had shelters provided for their flocks. These are startling facts, and would seem not to require a word of comment. That men will so utterly disregard their interest, is truly astonishing. They will make all needful arrangements for the comfort of their horses and cattle, and yet so absolutely neglectful of that, to me, most interesting of all domestic animals, sheep. But I will be charitable and not further reprobate, as I *once* lived in a glass house myself. I will only say, the common feelings of humanity seem to dictate, that we ought to do that for our flocks which we are willing to do for our dogs, which we do not turn out to howl with suffering from exposure to the pitiless storm.

My loss last winter ('36 and '37) was 24 out of nearly 1800, and this winter up to this period 13 have died, 8 of which were small and late lambs; and from present appearances, I feel confident in stating, that I shall not lose to exceed half a dozen more; my flock exceeds 1900.

For other advantages resulting from protection, viz: *prevention of disease, improvement of fleece, and increased weight of fleece*, I refer your readers to two communications furnished the N. Y. Farmer by the writer, and republished in the last volume of the Genesee Farmer, in which every one of the above positions are clearly demonstrated so far as my own experience has carried me. Want of time will compel me here to leave the subject.

Lansing, Tompkins Co. L. A. M.

Construction and Use of the Roller.

Mr. Tucker—We farmers are an ungrateful set of beings,—we are very fond of receiving, but are exceedingly backward in communicating,—we peruse with eagerness the result of your weekly labors and toils, but are scarcely ever ready to assist you in the great and good work in which you are engaged; like good school boys, we are all for learning, but never for teaching. Under certain circumstances this is right, but under *our* circumstances this is *not* right. "Help one another," is a sentiment which is peculiarly appropriate to farmers; but the part which *I* have acted in this matter, is such as cannot be approved, although I am so illy qualified to render you any valuable service, or to be of any use to my associate husbandmen; and this is the reason, and the only reason, you have not heard from me for so long a time. The fact is, hands that are used upon rails, the plough, the axe and the spade, use the pen rather reluctantly, and for the most part ungracefully. Yet I am sensible, that to communicate for your invaluable journal the result of our experiments in the tillage of the soil, which you have so often enjoined, is our bounden *duty;* and the most effectual and convenient method of advancing the cause of agricultural improvement. I feel myself under very great obligations, for the repeated and invaluable help I have obtained from the *Genesee Farmer.* I have no doubt the advantage which I have received from the reading of that weekly paper, has *ten times* exceeded the cost of it. The whole seven volumes thereof, which now lie before me, I esteem as a most valuable agricultural library.

The subject on which I would write a few lines at this time, is that of the Roller.

Why so many are content to be without this important implement, I cannot conceive, unless it be ignorance of its utility. I would almost as soon be without a plough or a harrow, though these are absolutely indispensable.—But if you please, sir, I will give a short account of the uses and advantages of this article, as I esteem them. All grass land, it is now generally conceded, when ploughed, should be turned over *smoothly;* there to remain undisturbed for one crop at least. It is important that all the vegetable matter thus turned under, should, in the course of decomposition, become food for the crop which is put upon the surface. But decomposition will not take place, unless the *air* is excluded. Now, to effect this object, let the roller follow the plough. Thus the sod is pressed down, the air mostly excluded from the vegetable matter, the field is made smooth as a garden, and the harrow, which follows the roller, fills up all the crevices, pulverizes the surface, and thus the field is well prepared for the reception of the seed.

The roller should also be used after the seed is sown, and harrowed in, especially all seeds that are sown broadcast and in the spring of the year. The surface soil is more perfectly pulverized and pressed about the seed, which essentially advances its vegetation. Many grains of the seed, which, after the harrow are left entirely upon the surface, especially peas, are by the use of the roller so far buried or indented into the soil, that they will vegetate and grow to maturity. The surface is also made more smooth, and the harvesting is thus facilitated and rendered much more pleasant. But the most important use of the roller, is on winter wheat; and here the advantage is three-fold.

By the operation of the frost of the night, and the sun during the day, especially at this season of the year, winter wheat on almost all soils becomes more or less detached from the soil; and the roots are often, as we all know from sad experience, entirely thrown upon the surface. In such case, it is doubtful whether the use of the roller is of any advantage; but where this is only partially the case, I have no doubt, from actual experience, that by passing the roller over the field, the roots are so pressed into the earth, that very many of them are made to grow, which otherwise would never show any signs of life or vegetation. Another advantage is, wheat by this operation will spread more, as farmers say, and send up more stalks. Another advantage is, clover seed sown upon the wheat is sufficiently covered by the use of the roller, without harrowing.

Now for the construction of this useful implement. There is an old maxim, which farmers especially should remember, to wit: "that which costs nothing, is nothing worth." During the five years which I have been a tiller of the soil, I have learned one thing to my satisfaction; i. e. if any particular farming tool is worth having, a good one is in a long run the cheapest, though it cost five times as much as a *poor* one. It looks so much better—it is so much more easily managed—it is so much easier for the team—and last, though not least, it does the work so much better. For these reasons, I will not use a plough that will not turn the furrow smoothly, or that is not *sharp;* nor will I use a harrow, whose teeth are blunt

as a sled stake; neither will I use a hoe that is as thick as a mill-saw, or as edgeless as it comes from the forge; nor a roller made of an oak log!

There are many who call themselves farmers, who scarcely know the value of a *good, well-constructed* implement; but if it can be obtained *cheap*, they say "it will do," and thus burden themselves and their teams to an extent which is almost intolerable. When I commenced my present employment, I procured a roller, and it was made as follows: I went to the wood and cut a white oak log, six feet in length, and sixteen or eighteen inches in diameter. It was barked and made nearly round, pins put in the center of each end, and the frame hung upon these pins; but I soon found that the *weight* and the diameter were entirely out of proportion. The draft was so heavy, that on mellow land four cattle were necessary to draw it. After using this article to my heart's content, I went about an improvement; and it was after this fashion—of two inch white oak plank, well seasoned, I made four wheels, three feet in diameter, double; that is, each wheel two thicknesses of the plank. In these wheels I set cast boxes 1¼ inch in diameter; through these boxes a round iron shaft, as an axletree. Two of these wheels were set up on the edge six feet apart, and the other two in the center half an inch apart. In this position the wheels were covered with plank sawed 2 by 4 inches, dressed beveling on the edges to fit to each other; then saw in two between the two center wheels. The frame is made in the usual form, and hung upon the iron shaft which runs through the center. Thus the roller is sufficiently heavy, and being three feet four inches in diameter, and running upon an iron shaft with cast boxes, and in two parts, is managed almost as easily as a cart. To keep the axletree shaft perfectly in its place, to prevent its getting sprung or bent, and also to keep the two parts of the roller from rubbing together, a bar of Russia iron passes through between the two parts of the roller, and is attached to the frame both forward and behind. The axletree shaft passes through this iron.

The whole cost, including blacksmith's work, materials and labor, was about $15; and I am so well satisfied with it, that, as a roller, I would not exchange it for as many of the first description as could stand between Lockport and Rochester.

Yours truly, NIAGARA.

APPLES.

MR. TUCKER—I have read with much interest, J. J. T's excellent article on the apple, in the March number of the Monthly. The culture of *good* apples is not sufficiently attended to by our farmers, and the idea of the *succession* of good fruit for the greater part of the year, does not seem to have occurred to the majority at all. For my part I love a good apple, and find in J. J. T's catalogue many of my favorites; and perhaps they are all there; for apples like other fruits are known in different places by such different names, that it requires some skill to trace them. Among the winter apples, I was somewhat surprised to notice the omission of the Gilliflower, as that is a good desert apple, and a pretty good bearer; to have included all good apples, would, however, have been manifestly impossible, and perhaps some of those named are a preferable substitute. I have two varieties of the Bough apple, or which are so called, the White and the Red; the last coming to maturity a week or fortnight later than the first. They are both fine apples, the red rather higher flavored of the two; both great bearers, and I know of no varieties more deserving the attention of farmers than these. Where grown in sufficient quantities, they not only give us our earliest fruit, but remain good through the fall, ripening gradually, and not, as is the case with some apples, all at once. Accident has shown me that they may be kept through the winter if desired as well as most apples, and thus an important point is gained for those who like this variety of sweet apple.

In gathering my greenings last fall, my man threw in a dozen or two of the red Bough, and they were taken out the last of February in fine order, fresh and sound; and a friend, who has a fine orchard of young grafted fruit of the best varieties, assured me a few days since, that a few bushels of the white bough, which he put up with his winter apples, had kept in the most perfect manner. If my brother farmers, generally, will read J. J. T's paper, and act upon its recommendations, a great change might be produced in a few years in the aspect of our orchards, and the quality of our fruit. A few dollars spent in grafting trees that yield inferior fruit, would be well applied, and as most farmers can do their own grafting by following the recommendation of your correspondent, it is to be hoped another spring will not pass away without the commencement of an improvement that will contribute so materially both to the profit and the pleasure of the farmer. H. M. G.

Sow Spring Wheat, if your Winter Wheat is injured by the Frost.

MR. TUCKER—Last spring I had a piece of late sown wheat, that looked fine when the snow went off; but our spring was unfavorable for such grain, dry, freezing and thawing, and almost destroyed it. I made my calculation to plough it up and sow it to oats; but being averse to ploughing up crops, I concluded to try an experiment, (to me it was an experiment.) I know not but others have tried it before; I sowed about two-thirds of the piece with spring wheat, half a bushel to the acre, then harrowed it lightly, and rolled it down smooth. The remainder of the field was harrowed and rolled the same as the above, except one small land, which was left unmolested. The result, on that part sown with spring wheat, harrowed and rolled, was over twenty-five bushels to the acre; on that harrowed and rolled, about one-third as much; on the small land that was left without doing any thing to it, was hardly worth harvesting; it was so thin that it blasted and shrunk. If there should be any of the readers of the Farmer with wheat situated as the above described, let them try the experiment, and I will be accountable for the result. My experiment with man and team one day, put $100 in my pocket. A. FORD.

P. S. I procured two quarts of Italian Spring Wheat last spring, and raised nearly three bushels from it. I mention this, that people in this region may know where it can be had another year.

Union District, Mich. March 11, 1838.

HOOF-AIL.

MR. TUCKER—The hoof-ail in cattle seems to be a subject with which we are all more or less interested, and I perceive, with no small degree of pleasure, a communication in the 8th No. of the 8th Vol. of the Genesee Farmer, written by Dan BRADLEY, Esq. of Onondaga. Although I am not personally acquainted with him, I always read his communications on Agriculture, and every thing pertaining to that science, with no small degree of pleasure; and whatever he states to have ascertained to his own satisfaction, by observation and inquiry, I am almost led to adopt without inquiring into his reasons for doing so; because I believe, by investigating any subject, he is as likely to ascertain the whys and wherefores as any man who has written on the subject of Agriculture, or that which is connected with it. I was sorry his communication was not more lengthy, so as to have enabled him to give his reasons in full for his conclusions respecting it; and I hope he will yet have the goodness to give them in another communication, so that all interested may have an opportunity of adopting his views understandingly. For myself, I should be much gratified to have him state the objections to the theory of that disease being caused by the frost, which he says cannot be satisfactorily removed.

I too had come to the conclusion that it was frost, and have not yet been able understandingly to change it for any other; the effects of the disease being in all respects, as far as my experience extends, precisely the same as freezing, and its affecting cattle only after cold weather commences; and I have never known cattle affected with it that had been kept in a warm place, with a plenty of litter to lie on, if they were likewise kept clean; and its effecting the hind feet only, which are undoubtedly more exposed to frost than the forward ones; all of which reasons served to confirm me in my opinion, that the disease was occasioned by frost, but I would cheerfully give up my opinion for one that appeared more rational, for if we can once ascertain the cause, we can most likely find a cure for the disease.

The disease, as far I have been acquainted with it, was so easily attributable to frost, to which I have never heard any satisfactory objections, that I have adopted it without looking for any other. The intricacy of ascertaining the correctness of the theory of its being caused by eating ergot, was such that I despaired of being able to attain it myself, and have never made the attempt. I have known cattle affected with that disease, or something similar to it, early in the fall or winter, but not until after freezing weather had commenced; and whenever they were attacked with it before the cold had become severe, it was slight, and after that, in some cases, they seemed to have a relapse of the disease, when it generally proved fatal. I always imputed the first attack to frost as well as the last. It is generally admitted, I believe, that a limb once frozen, will be more subject to freezing again, and I suppose if a limb was effected in any way it would be more liable to freeze than a sound one. I hope Mr. Bradley will explain, as far as he has informed himself, how ergot effects the system, so as to show itself only in the feet, (and I believe the hind feet only are affected,) and how he has ascertained that frost is not the first cause as well as the last. Was the first discovery of the disease in the feet of an animal different in any respect from frost; and if it was not frost, how was it ascertained that freezing did ingeneral accompany the disease? Was the foot discovered to be in a frozen state at any time after the first attack of the disease, if not, how could it be known for a certainty that it had been frozen? Had the second attack a different effect in any respect from the first?

I believe ergot in spear grass or rye, (and probably in any other vegetable which produces it,) is generally considered poisonous, and if taken in sufficient quantities, will be productive of some bad effect; and it is possible it may affect the extremities only of animals that eat it. I should be much gratified to be informed of the peculiar operation of it, so as to know why it does affect any particular part of the system generally or always, without being perceived in any other part. H. N.

March, 5th, 1838.

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MR. TUCKER—In looking over the February No. of the Monthly Genesee Farmer, I noticed a request of a correspondent for information, and for a remedy or cure for the hoof-ail in cattle. This disease is very different from what is commonly called the fouls, as in the latter case the legs scarce ever swell unless in aggravated cases and of long standing. In years gone by, I have had several cases of the former complaint, which gave me a great deal of trouble to cure, until I heard of the following remedy, which, *by the by*, I got by taking an agricultural paper, which is, to throw the animal or confine him in a gallows, then take a sharp sash or fine saw, cutting off the end of the hoof so as not to touch the *quick* in the operation. The length of the hoof taken off, varying, of course, according to the age of the animal and its hoofs. Then with a keen strong knife, and to save the animal from as much pain as possible, commence by paring away at the point of the hoof, above and below, taking it off rounding in the middle, so as to leave a point on each side of the claw, which proves a defence to the tendon; having proceeded thus far, with a quick rounding stroke, cut away in the center until the *blood* flows freely, which will often be at first vent, very black and putrid, but will soon change to a red and healthy appearance. When I have performed this operation in the first stage of the disease, it has always given instantaneous relief, and the animal has entirely recovered in three or four days; and in every case, it has effected a cure

speedily. If the disease has been of long standing, I would advise an application of fish oil to the swelling or cracks, about the dew-claws or hoofs, and to be continued until it shall heal. If the first *bleeding* should not be sufficient to abate the inflammation, the second or future operation may be performed, with the animal standing or lying down, by suddenly perforating the former incision with a sharp pointed knife.

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Foot Rot in Sheep.

The following remedy for the foot rot in sheep, taken from the Cultivator, Vol. 2, No. 6, is at your service:

3 qts. alcohol, 1 pt. spirits of turpentine, 1 pt. strong vinegar, 1 lb. blue vitriol, 1 lb. copperas, 1½ lb. verdigris, 1 lb. alum, 1 lb. salt petre, pounded fine, mix in close bottle, shake every day, and let it stand for 6 or 8 days before using; also, mix 2 lbs. honey and 2 qts. tar, and after paring the hoof deceased, apply the compound, then put on the tar and honey. I would remark, that in the application of this remedy, a very *important point is to be sure to pare the hoof down as far as the suppuration has extended in the hoof*, as without this, the application will be of little use. No farmer ought to be without this preparation *kept on hand*. To all sores or wounds in animals requiring any application of a caustic nature, and especially for the fouls in cattle, I have found it to be a most excellent remedy.

Now, Mr. Editor, I would say for your encouragement, and for the encouragement of every farmer in our wide spread country, that the above *recipes alone* have been of *more worth* to me than the *cost* of an *agricultural paper* for 100 years, if I should live so long. I was a subscriber to the first agricultural paper published in this state, by Solomon Southwick, and have continued ever since to take those kind of papers, and now take *two*. I hope to see the time soon, when all engaged in agriculture will learn and pursue their true interest in this matter; and to make some return for the many benefits received from this source of information, I have been induced to send you the above, which you will dispose of as you may think proper.

With respect yours, LEONARD D. CLIFT.

P. S. I have observed that you have given an extract from my letter to Judge Buel, respecting the weight of my Lincoln wool and yearling bucks, and enclosed are two locks just taken from full blood buck and ewe lambs, only eight months old. L. D. C.

Carmel, Putnam Co. March 8, 1838.

"LAND, HO!"

The Journal of Commerce has an editorial article under the above head, in which they demonstrate that the times are going to be better, and that every man who has legs of his own, will be able to stand on terra firma. Without going into a synopsis of their argument, I will take it for granted that such is, indeed, the prospect—that the country is fast emerging from the deep depression under which she has labored for the last three years—that the produce of the country has about completed the payment of our foreign debt, and retrenchments have prevented the accumulation of new ones; and that we are now about entering upon as good times as a prudent man can wish for. Such being the prospect, it is natural for a man to cast about himself, and see what enterprise he shall engage in,—how he can extend his business to the best advantage.

A few suggestions to farmers, to whom good times will not come amiss, may not be inappropriate at this time.

1st. Let no farmer, or farmer's son, leave the plough and turn merchant or speculator. We may recollect, at the commencement of the late disastrous times, how many regretted having left the country and gone to the city, to become merchants or merchant's clerks, and how their prospects were swept as with the besom of destruction—how loudly the city papers called upon her citizens to flee into the country, and betake themselves to the more certain business of agriculture. Many, we know, did so. Some perhaps are already tired of the dull routine of a farmer's life, and long to embark in the more exciting business of the city, and make haste to be rich.

2d. Let it not be the first thought to see whether we cannot buy out some poor neighbor and enlarge our farms. This disposition to grasp all the land within our reach, "that we might dwell alone upon the earth," has been the ruin of many a farmer, and if any man has seen hard times during the *late* disaster, it has been he who, not content with land enough, has gone on adding field to field, and debt to debt, until the sheriff has swept the board, and our farmers has gone west where there is indeed land enough.

3d. Let them who have weathered the storm, and can calmly look forth from a sung harbor upon the foaming waves now settling into rest, not be anxious to emigrant to the far west. Let him be content with the home that has sheltered him, and his family, and remember how much he has enjoyed, while some of his acquaintances have been struggling with poverty and want, far from the comforts and happiness of home, in the boasted land of promise: the El Dorado of the imagination.

4th. Let farmers reflect in how many ways they may safely enlarge their business—throw off the restraints which the times have rendered prudent, and which cannot be detrimental if the cheerful vision of good times should prove a mere phantom.—How their farms can be made to yield double their present produce by following the most improved culture. Let them reflect that money and labor may be safely invested in highly manuring and and limeing the fields—that the introduction of the most improved breeds of cattle, horses, and hogs, upon their farms is a safe business—that the extension cultivation of root crops is one of the greatest improvements of the day.

5th. To those who are blest with plenty of children and small farms, I would say, enter immediately into the culture of Silk. This is a business that cannot be overdone, and if encouraged by the bounty from the state, as recommend by the committee of the Legislature on agriculture, cannot be otherwise than a profitable business.

To those who have been long tossed upon the troubled wave of commercial disasters, the sound of "land ahead!" must indeed be cheering. The storm has been truly terrific—many have gone by the board—few but what have had to cast overboard their goods, to keep the ship afloat. And now, if indeed we are nearing the shore let the suffering of the past instinct as to the future—let none drive, with all sails set, blow high or blow low, and mind keep a good look out ahead. But after all, he is the best off who stays at home—feeds the pigs, and tends the poultry—or goes all day long plodding at the plough's handle.

"A farmer's life, is the life for me," &c.

March 10, 1838, O. P. Q.

Cultivation of Wheat.

We insert below a communication from a valuable friend and correspondent on this subject, which is now engaging the attention of the farmers of this county.—The subject is to be treated at some length. The writer is a practical farmer, and we believe his essays will be perused with interest.—*Plymouth Co. Mem.*

I would invite the attention of my brother farmers in Plymouth county, to the all-important subject of raising wheat. There is much land in the Old Colony peculiarly adapted to this crop, and in my humble opinion, not one dollar should be allowed to go out of the county for flour, unless, indeed, there should happen to be a famine. There can be but little doubt (there is none in my mind) but wheat is a more certain crop even here than rye; that on an average, with good management, one-third more can be raised on an acre—and when raised is worth twice as much. Then what objections can there be to cultivating it? Why, our fathers and grandfathers have told us that wheat will not grow in Old Massachusetts—the land is old, worn out, and incapable of producing wheat—and so we take it for granted. From several years experience, I am convinced that this is not the fact; that, if the land is deficient of some of the peculiar constituents of wheat, it can easily be supplied, and when supplied, we are as sure of a good crop, as we are of any other crop we cultivate.

Wheat succeeds best on a light loamy soil in good condition; and if it could succeed clover, or be sown on a clover ley, so much the better. Fresh unfermented manure should not be applied, or if applied, should be ploughed under the soil, and four bushels or more of lime or ashes should be sown on the acre after the wheat is up. Sow, harrow and roll in your wheat in the same manner as you do your rye.

In our northern latitudes, spring wheat succeeds best, of which there are several varieties, the bald, the tea, Italian, &c. &c. Spring wheat should be got in as early as the ground can be properly prepared to receive it—it is also essential that the seed be properly prepared before sowing. Let it be washed in small quantities, skimming off the foul seeds that float on the top—drain off the water, lay it on a clean floor, and mix two quarts of slacked lime, and one quart of plaster with each bushel—spread it and shovel or rake it over for three or four days before sowing; five pecks of seed is sufficient for an acre of land. It should be harvested soon after it is out of the milk, and before the grain becomes hard, and shocked in the field until it is perfectly dry, and can be moved away with safety, by which process much labor is saved in turning, threshing, &c. An able writer says, "every farmer ought to live as much as possible on the productions of his own farm. Fashion requires that every family should consume annually, more or less good flour; every farmer, therefore, who has land adapted to its growth will do well to raise enough for his own consumption. It is good economy to raise every thing on a farm which is practicable and not too expensive for family use. It saves much money and considerable time which would otherwise be employed in procuring the necessary articles from abroad." C.

Mattakees, Nov. 1837.

Agricultural Societies.

We observe by the last Belvidere Apollo, that the incipient measures have been taken to form an Agricultural Society in Warren County, New Jersey: by the Village Record, we learn that a very large meeting of the farmers of Chester and Delaware counties, Pennsylvania, has been held in the borough of Westchester, and a committee, appointed to draft a constitution for a similar society for those two counties. The meeting was organized by calling Dr. Darlington to the chair; subsequently to which, committees were appointed to draft resolutions and prepare a constitution for the government of the Society. At the head of the latter, for Chester County, we observe the name of Dr. Darlington, a gentleman as distinguished for his agricultural zeal, and botanical acquirements, as he is eminent as a physician. The right spirit prevailed, as we learn from the Record, and the meeting "composed of the right materials—the bone and sinew of the counties, the hardy, industrious, intelligent and persevering farmers—those who know how to make a poor farm rich." And in our last week's paper will be found the proceedings of the meeting of the farmers of Kent county, Md. for the purpose also of forming a kindred society.

These movements, almost simultaneous in three neighboring states, speak well for the cause; and we sincerely hope, that the noble feelings that have prompted them may spread in every direction—that they may move onward until they penetrate the bosoms of every man engaged in husbandry in our country, as we are sure that nothing is so well calculated as such associations to further and promote the best interests of Agriculture. Almost every other class of Society have institutions peculiar to their respective callings; and why should not the farmers and planters have theirs?

As the spirit of forming Agricultral Societies seems to be abroad in our land, we would respectfully make one recommendation to those having charge of the Constitutions—it is this—than an article should be engrafted on each, making it obligatory upon each member to *furnish*, at each annual meeting of the society to which he may belong, an essay on some experiments he may have made, or a statement of his mode of culture. If such provision were to form a part of the Constitution of each Agricultural Society, and be faithfully carried out, a body of agricultural information would be gotten together, that would prove of incalculable value to the whole country; the which, if published in some agricultural paper convenient, would diffuse a mass of knowledge throughout our wide spread limits, whose benefits would be as lasting as our mountains. If it should be said, that every farmer cannot write sufficiently well for publication; we reply, that the plain homespun statements of unpretending farmers and planters, detailing in their own way and phrase, the operations of their labors, would, to a large body of readers, be not only acceptable but instructive. Who is there among us when he reads of the product of a farm, but likes to see the manner of culture detailed? None. And who is there so well qualified to perform this office, satisfactorily, as the practical man? None.—But then if there be some to whom writing is a labor, there are also a large body of well educated agriculturists in every country, whose *essays* would challenge admiration by the propriety of their style and beauty of diction. To such, the labor

would prove a pleasure, while the community would be enlightened by the soundness of their views; so that let us view the matter in whatever light we may, much good is likely to flow from the measure we propose; and we hope it may be received as favorably as it is well intended.—*Farmer and Gardener.*

Blight in Pear Trees.

We direct the attentien of our readers to the communication from Mr. Lazell, of this place, in reply to the remarks of "Pyrus," in the Genesee Farmer, on the subject of Blight in Pear Trees. The subject of blight is one which deserves and is now receiving much attention. The Horticultural Society of Philadelphia have offered the liberal reward of Five Hundred Dollars, to any one who will point out a true remedy for it. It would seem to be necessary te find out its cause before a reliance can be placed upon any remedy as unerring and specific—accordingly we find that many individuals of experience, are publishing their views on the subject. Among others Pyrus has advanced his opinion, which is briefly this: that the blight is produced by a certain virus communicated to the tree through its blossom—generated by the sting of an insect or in some other manner. This virus being thus communicated to the blossom is gradually distributed through the branches, and the whole tree, until it dies. Our correspondent shows that it is improbable that this is the true cause—or at least that blight may be caused in other ways—because he had trees blighted which had never yet been in blossom; and the inference is irresistible that the blight of his trees was caused by a late and severe frost.

We find in our exchange papers frequent articles on this subject, and many theories advanced. Among others, we find a remedy pointed out by a gentleman of Poughkeepsie, N. Y. This remedy is simple, and consists in impregnating the ground near the roots of the tree with iron, where this mineral does not already exist in the soil. Although the supposed cause of blight is not here pointed out, there may be good reason to believe this application will often prove to be effectual, either by affording to the tree its natural aliment, or by destroying or driving away noxious insects, which prey upon it. Public attention is now properly directed to this matter, and we trust that our horticulturists will not leave it until they are satisfied of the true cause and the true remedy.—*Ohio Farmer.*

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Mr. Chew:—In the 5th No. of the 8th volume of the Genesee Farmer, there is published a communication over the signature of "Pyrus," on the subject of *Blight in Pear Trees*, &c.

I have had some experience which conflicts with the "opinion" advanced by Pyrus, who has written *Mene Tekel* upon the theories of all who have gone before him on the subject, save one, whose crude speculations he has erroneously adopted, as I shall hereafter most conclusively show.

Invited among others, by Pyrus, to communicate any information I might possess on the subject, perhaps it would be more courteous to send these remarks to the Editor of the Genesee Farmer for publication. But, if my friend Tucker, whose "Farmer" I have profitably to myself patronized for years, deems them worthy of insertion, he can transfer them from your columns. But a paramount reason for presenting them to the "Ohio Farmer" is, that while I wish every success to the former publication, I feel bound by the ties of "State Rights" to contribute my mite to the interest of the latter. Not to sustain the Ohio Farmer, will be suicidal to the farming interest of the Buckeye State.

But to subject. I have between two and three hundred varieties of Pears planted, in my nursery grounds for fruiting.—The first were put out in the spring of 1830, and more or less have been planted every year since. Most of them have made rapid growth. In the spring of '34, some of the mmeasured four inches in diameter In May of that year, when the trees were almost in full. foliage, we had the most severe frost I ever knew in this climate at that season of the year. Even the leaves of the stubborn oak were completely seared. The Cambrium, particularly in vigorous growths, was frozen and soon turned black, and cankered. A few of my trees immediately died, and others put out new foliage, and in the course of the summer *blighted* at the extremities of the limbs; and all such, one excepted, in the course of the next summer died outright. In the one exception I cut all off to the smooth bole, about three inches from the ground. That tree has now many luxuriant branches.—*Not one of these trees had ever borne fruit, nor had I then on my premises a single tree which had ever blossomed.* What then becomes of the theory of "Pyrus," who attributes the blight to "a virus generated in the young fruit of the tree while blossoming?" Will "Pyrus" give it up?

What connection the chilling blasts of May had with the blights of August, I am unable to say, but that the one immediately followed the other throughout this region so as greatly to discourage the cultivation of the Pear, is most certain.

For two years past there has not been an instance of blight in my Pear trees.

JOHN A. LAZELL.

Hort. Garden, Columbus, O., March, 1838. [*Ib.*

Brussa Mulberry Trees.

The administrators of the estate of David Ruggles, give notice that they will sell 6000 Brussa Mulberry trees at public auction, on the 7th day of April next, at the Nursery in Newburgh, in lots to suit purchasers. The sale will commence at 10 o'clock, A. M., and will be peremptory. The seed from which these trees were raised was procured from Asia Minor at great trouble and expense by Mr. Rhind, the United States Commissioner. They have, say the administrators, at no time been affected injuriously by our late severe winters, not one of them has been killed or injured by the frost. They appear to be as hardy as the oak.

Seed Store Agencies.

LARGE and complete assortments of Seeds, put up at the Rochester Seed Store, may be found at the following places:

Cleveland, John Williams,
Buffalo, W. & G. Bryant,
Lockport, G. W. Merchant,
Batavia, G. V. Verplanck,
Le Roy, M. P. Lampson & Co.
Geneseo, J. F. Wyman,
Mount Morris, R. Sleeper,
Canandaigua, W. M. Chipman,
Geneva, J. & J. N. Bogart,
Palmyra, Hoyt & May,
Oswego, Holden & Vincent.

Of the character of these seeds we deem it unnecessary to say any thing further, than that we believe they will fully sustain the high reputation which this establishment has already acquired, and secure a continuance of the liberal patronage it has hitherto received.

☞ Persons wishing larger quantities or different kinds than can be found at the above places, may leave their orders with the Agents, and the seeds will be sent to them.

REYNOLDS & BATEHAM.

Rochester Seed Store, March 31, 1838.

Chinese Morus Multicaulis. &c.

$35,000—Morus multicaulis, of the genuine kind, yet remaining unsold, and will be sold and immediately delivered; or contracted for, to be delivered the ensuing month.

15,000 Morus expansa, 5 to 7 feet high, a variety equally valuable with the Morus multicaulis, very hardy and suited to a northern climate.

12,000 Brussa mulberry, 3 to 7 feet.
100 lbs. White Italian Mulberry Seed.
800 lbs. White and Yellow Sugar Beet seed.

Also, Fruit and Ornamental Trees and Plants, Dahlias of all kinds.

Green House Plants, &c. Priced catalogues of which will be sent to every applicant. WM. PRINCE & SONS.

March 31, 1838.-3t

Superior Garden & Agricultural Seeds.

THE subscriber has now on handja full supply of Garden and Field Seeds, growth of 1837, among which are the finest Cabbages, Cauliflowers, Broccoli, Radishes, Peas, &c. that are cultivated in England, France, and Holland, together with every sort that can be raised to advantage in our own country, and which are grown expressly for my use from stock furnished and raised by the most experienced gardeners in this country; in short, every article emanating from my store, warranted genuine and fresh.

Also, Skinless Oats, Potatoe Oats, 44 lb. weight to the bushel, Perennial Rye Grass, White Clover, Lucerne or French Clover, Orchard Grass, Herd's Grass, White Mulberry, and Yellow Locust Seeds, Spring Tares or Vetches, genuine Mangel Wurtzel, and Ruta Baga and Field Turnep Seeds, also Italian Spring Wheat, well worth the attention of Farmers.

Wholesale Dealers supplied on accommodating terms. Price lists, by the pound and bushel, furnished on application, as also catalogues of my whole collection, gratis.

Flower Roots, Bulb Glasses, Green-house Plants, the best Books on Gardening, &c. at various prices, Bird seed of every sort, Pearl Barley, Oatmeal, Embdon Grots for Gruel, Split Peas, White and Brown Mustard Seed, Garden Flower Pots and Garden Tools, Russian Bass Mats.

The Flower Seed department embraces the choicest variety to be found in this country, in which are included choice double Dahlia Seed, Carnation and choice Pinks, German and China Asters, splendid Double Balsoms, with an addition of several new varieties, accompanied with a printed direction for culture and management.

Orders will be punctually attended to and carefully packed and forwarded as directed, but as the collection of distant debts are often troublesome, and sometimes impracticable, it is desired that satisfactory reference be made to persons in Albany, when the order is not accompanied with the money.

☞ Also, SEED CORN.—The subscriber has a quantity of the celebrated 12 rowed Dutton Corn; the advantages of raising this corn are its prolific qualities.

W. THORBURN, Seedsman,
Sign of the Plough, 317 N. Market st, opposite Post Office.
Albany March 17. 1838. mar24

THE HIGH-BRED TROTTING HORSE
BELLPORT!

BELLPORT will stand the present season, commencing 1st of May and ending 1st of August, at Clarence Hollow and Batavia. Terms, $15 to insure, payable 1st of January next.

DESCRIPTION.

Bellport was foaled at Long Island, June, 1831, will consequently be seven years old the coming summer, is of a beautiful bright blood bay, with a small star in the forehead, one white foot, and black legs, mane and tail—is within a fraction of sixteen and a half hands high, (65 1-2 inches,) of proportionate girth and length, a well set head, elegant arched neck, full powerful chest, of beautiful smooth symetry of limbs, and yet of great bone and muscle, weighing twelve hundred and forty-seven pounds.

OF HIS PEDIGREE.

It need only be said, that he was got by the Imported Horse Bellfounder, out of Lady Alport, he by the celebrated trotter Old Bellfounder, dam Velocity, by Haphazard, by Sir Peter, out of Miss Henry, by the famous Eclipse, and thus up to the Darley Arabian, the great progenitor of England's stoutest and most beautiful racing stcok. Lady Alport was got by Membrina, he by Imported Messenger, dam by Tippoo Saib, &c. &c. For further particulars of which horses see Stud Book.

It will be seen by the above, that Bellport unites the *best* of England's *racing and trotting blood.* Bellfounder at five years old trotted 2 miles in less than 6 minutes, and the following year was matched for 200 guineas to trot 9 miles within 30 minutes, which he won easily. His owner shortly after challenged to perform with him 17 1-2 miles within one hour, which was not accepted. Velocity trotted on the Norwich road in 1806, sixteen miles in one hour; in 1806, trotted twenty eight miles in one hour forty-seven seconds, and has done many other great performances against time. With the exception of Flying Childers, from the same progenitor, Eclipse was undoubtedly the fastest horse ever known. Having *distanced* all competitors, he at last walked over the Newmarket course for the King's plate, and finding nothing hardy enough thereafter to match him, was never again started. Haphazard, Sir Peter, Membrina, Tippoo Saib and Messenger, were among the best horses of their day, and as good stock as England ever produced.

Bellport was bred by T. T. Kissam, Esq. of New-York, and was selected after much care and attention to the subject, for his uniting good blood and limbs to fine action and great substance, qualities so rarely found in the light race horse of the present day. He has stood two seasons in this vicinity, his stock shows fine size and form, and will undoubtedly prove very superior, either for the saddle or harness, and particularly adapted for the heavy roads of Western New-York. His spirited breeder in a letter accompanying him out here, thus speaks of the blood:—"Bellport is from a stock held in high estimation, both in England and in this country. There are several horses here sired by Bellfounder that can trot a mile within 2 minutes and 45 seconds, and could not be bought for $500; one of them could not be had for $1500; it is supposed that he can trot a mile in 2 minutes 35 seconds. This young horse I have never had trained, nor even much practiced; he has a very fine step, and I have not a doubt but he will be able to trot a mile within 3 minutes."

The Farmer will therefore see, that he may reasonably calculate on the best of stock from this source, and it is a matter of no trifling importance to him, whether he shall turn off a colt at from $200 to $500, that has cost no more to be raised than one that will hardly bring from $50 to $80.

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Bellfounder is a full brother to Bellport, one year older, marked as above, his color simply a shade or two darker, and is half a hand less in height. He is a horse of admirable finish, and with a partial trial under the saddle the year he was 5 years old, easily trotted over the Harlem Course (a few feet short of a mile) in 2 minutes 45 seconds, and it is the opinion of his trainer, that notwithstanding the difficulty of curbing so high spirited a horse to a trot, that upon a second and more thorough trial, he could be given as fast a foot as ever graced the trotting course of America. He will probably stand the ensuing season on the Niagara River road, two miles below Black Rock.

Either of the above horses will be sold, or exchanged for other stock at a fair price, or hired to a responsible person for any part of the country.

For further particulars refer to L. F. Allen or A. B. Allen, of Buffalo. HENRY GORDON.

March 10, 1838.

Monroe Horticultural Garden & Nurseries, Greece, Monroe Co., N. Y.

THIS establishment now comprises over 20 acres, covered compactly with Trees and Plants in the different stages of their growth.

The subscriber offers to the public a choice selection of Fruit Trees, of French, German, English and American varieties, consisting of Apples, Pears, Plums, Peaches, Cherries, Apricots, Nectarines, Quinces, Currants, Gooseberries, Raspberries, Grape Vines, Strawberries, Ornamental Trees, Shrubs, Plants, Hardy Roses, Vines, Creepers, Herbaceous Perennial Plants, Bulbous Roots, splendid Pæonies, Double Dahlias, &c. &c.

Also, a large collection of Green House Plants, of choice and select varieties, in good condition.

Orders respectfully solicited. Trees and Plants, when ordered, are carefully selected and faithfully packed, and if desired delivered on the canal one mile from the Nursery, or at Rochester.

Orders for Mr. Rowe's Nursery received by the publisher of this paper.

Catalogues will be sent to every applicant gratis, or may be had by calling at the office of the Genesee Farmer.

April 1, 1837. ASA ROWE.

Report on Neat Cattle.

At the annual meeting of the N. Y. State Agricultural Society, on the 2d of Feb. 1838, Mr. W. A. S. North, of Schenectada, read the following Report on the subject of Neat Cattle:

In drawing up the following remarks in pursuance of a resolution of the Society, passed at their last meeting, your committee have had some difficulties to encounter, the greatest of which has been the want of that personal communication with each other, which the importance of the subject demanded, and which has compelled them to put off the drawing up of the Report to the last minute. Of the many subjects relating to rural economy which were submitted to the different committees at that meeting, there is none more immediately interesting to the great body of agriculturists, than the one intrusted to your committee, to wit, the present state and future improvement of Neat Cattle. It is a subject which appears to be less understood, and to have received less attention, than any other, "and is most completely identified with our agricultural prosperity and with the comforts, and the very continuance of life."—That this kind of stock constitutes a great proportion of the wealth of the country may be inferred from the fact, that our state alone, according to the census of 1835, contains 1,885,771 cattle. It will hardly be expected that your committee should go into a particular history of all the known breeds of cattle, and of all their peculiar properties. Such a course would do in writing a treatise on cattle, but in the present case would only tend to confuse the mind of the inexperienced breeder. Your committee therefore have thought it advisable to confine themselves in the performance of the duty assigned them, to giving a short general description of the most common kinds of cattle among us, as well, those imported as our native stock, noting their good and bad points, and by stating the disadvantages and losses attending a careless and unskilful course of breeding, rearing, and feeding, endeavor to get up a spirit of reformation and improvement among the agricultural population; thereby increasing their wealth, and adding to the subsistence and comfort of all clases of the community; and if, by means of our report, and those which shall be read here to-day, the farmers could be induced to employ more capital, and to exert more care and skill in all the various branches of agriculture, and particularly to the one under consideration, it would greatly add to the productiveness of their farms, and their wealth. Many books have been published, detailing the great improvements made and still making in England in neat stock, but they cannot be expected to be in the hands of our farmers, and it will be our aim in this report, in some degree, to make up this deficiency, by endeavoring to show wherein our native stock are deficient, and recommending to them a better and more profitable course of breeding. To begin then with the most numerous and least profitable breed, the native cow.—"They are a mixture of every breed, and the intelligent and observing breeder, sees in them traces of almost all the English varieties, such perhaps as they were before science and attention had improved them, such as might offer to the American breeder the original materials of their most improved and valued stock, but requiring more time and perhaps more talent, skill and attention, than the American farmer would be willing to bestow on the subject, and yet necessary to enable him to arrive at the same results. This mixed breed are not very celebrated for any thing; some of them are good milkers as far as quantity is concerned, but as to quality of the milk and aptitude to fatten, they generaly fail. Their calves are of diminutive size, rarely giving more than 20 lbs. per qr. when killed, at four weeks old; and if reared, of slow growth, seldom coming in till the third year, and then requiring two or three years more to give them standing and character, such as it is, in the dairy. As to their characteristic marks, they are small, short bodied, thin and coarse haired, steep rumped, slab sided, having little aptitude to fatten, or to lay the fat on the right place. There is another class of the native cow, although distinctively marked, (as the horns are wanting,) yet this want will hardly entitle them to be considered a distinct breed, deserves to be mentioned in the enumeration of the native breed. Descended from the Galloway or Angus cattle, a long while ago, they still retain among all the crosses to which they have been subjected, some of the marks and good points for which their ancestors are still celebrated—that is to say, they are a docile, thrifty, hardy kind of animal, with much the same faults, as to form, of those above described, though perhaps more compact, shorter in the leg, a middling thick hide, and withal easier fattened. They are few in number compared with the horned cattle. There is one other species of the native cow, to which it is only necessary to direct your attention, as they are nearly as much celebrated in the sandy tract of country about Albany and Schenectada as the improved short horns themselves, the one for their beauty and good points, the other for their homeliness and bad points. They are peculiar to the sandy soils of our country, running wild in the woods in the summer, and picking up a miserable subsistence in the barn yard in the winter. They are long legged, raw boned, narrow hipped, sharp backed, steep rumped, slab sided, coarse haired, worthless race, and exactly answer the description of those kind that came up out of the river of Egypt in the time of Pharoah—"They are poor, ill-flavored and lean fleshed, such as were never seen in all the land of Egypt for badness." It is not likely that any improvement will be made in this kind of animal, the nature of the soil, the habits of growing the coarser kinds of grain, the foddering of straw in the winter, and pasturing in the woods in summer, peculiar to the inhabitants, (they ought not to be called farmers,) of the Pine bush, will for years to come prevent any permanent amelioration of their condition. If at any time, the spirit of improvement should enter into the calculations of these people, they might by judicious crossing, and a plentiful supply of roots and vegetables to their stock for a great part of the year, attain to something more respectable in this branch of business. This then appears to be the character, and these the qualifications of our native stock. Notwithstanding their defects, "most valuable selections might be made from them, and these crossed by bulls of the improved breed, would furnish perhaps the most useful stock for the practical man, who was not prepared to pay the high prices inseperable from imported stock." And it will be advisable to select cows, either from stock feeding in the neighborhood, or from those sorts that are best calculated for the nature and situation of the soil. The grand secret of breeding, is to suit the breed to the soil and climate. It is because this has not been attended to, that those breeds which have been invaluable in certain districts, have proved altogether profitless and utterly unworthy of culture in others. Let that breed then which is most profitable and best suited to the farm be ascertained, and having succeeded in this, strive to improve it to the utmost, by selecting and breeding from those which to beauty of form, unite the more essential qualities of possessing kindly skins, of weighing most in the valuable parts, together with a disposition to lay fat on the best points, as well as to fatten in a short period of time. The term "kindly skin" means a soft mellow skin, yet firm to the touch, and is as different from the hard, dry skin of some cattle, as it is from the loose, flabby skin of others. The sense of touch, or the art of judging of the disposition to fatten, has been brought to such perfection, that any well informed breeder can, on examining lean beasts, tell with tolerable certainty in what parts they will or will not fatten. The improved short horns are in all respects the most profitable species of animal to cross with the native cow in situations where the soil is rich and luxuriant. They are good milkers, quick feeders, arriving at early maturity, and affording the greatest proportion of good meat to its offal, from the thickness and softness of hair with which this breed is covered, they endure without suffering the severity of our weather; but to the full development of all their properties, and to obtain their most valuable returns they should be well cared for and fed upon a full bite of grass. That this valuable breed of cattle have not been more generally sought for as a cross with our native stock is owing in some degree, to their intrinsic value in comparison with others. It is true the first cost of pure bred animals is high, but when it is considered how extensive is the influence of a bull, and how many improved animals may be yearly obtained by his services, the remuneration is most abundant. A very fine pure bred bull may be obtained for from two to three hundred dollars, and such an animal at three years old, may without injury to himself wait upon fifty cows. In those neighborhoods where such an animal is kept, the half bred yearlings bring from ten to twenty dollars, and in some cases thirty dollars. Our farmers only want to believe this fact to act upon it. But how make them believe it? Why let those gentlemen whose tastes, whose consideration for the farmer, whose love of doing good and whose means are sufficient, purchase such an animal, and allow his neighborhood a discriminative use of his services till conviction followed the evidence thus brought home to them. This has been the practice of your committee, who have allowed the industrious and inquiring farmer the use of their bulls for a few years past, without collecting the amount professedly charged for their services, and they now generally pay the service fee cheerfully, and the work of improvement is in our sections of the country rapidly going on. Another reason why the improved short horns are not more eagerly sought for by the great mass of farmers, is the idea that they require more food and will not keep so easy as the native cow. Now, if they pay better, and in proportion to the extra feed they require, and no one will deny that they do, this objection falls to the ground. The truth is, that as long as the slovenly style of farming of the present day prevails, as it does in too many districts of the state, this objection will continue to be urged. There is yet very little good farming or systematic rotation of cropping pursued, either by our large or small farmers. The land is taxed to its utmost as long as it will bear an average crop of any thing, and when completely exhausted, it is seeded down with five or six pounds of Timothy and Clover to the acre and Oats or Buck Wheat, and if, as is generally the case, the grass is light, it is pastured until it recovers again in some measure by the manure dropped upon it, or till it is covered with a heavy growth of mess, which turned under in the right time will, after a fashion, enable it again to undergo the process of cropping. Until this system is abandoned, and more attention paid to keep pasture lands in better tilth, and the growing of root crops for winter fodder for neat stock, it is almost useless to attempt to improve the breed of cattle, or any thing else. Even the aristocratic race of the short horns in such cases would be compelled to knock under, and in process of time, by hard fare and inattention, would get back to the point from which skill and science, and care and attention first rescued them, and gave them their present elevated station among the brute creation. Let it be remembered, that a good bite of grass in summer, and generous feeding in winter, is necessary to the full development and profitable culture of the short horns. Where this cannot be had, and the land is light and subject to drouth, the beautiful little Devon will best find its value, and though not so good a dairy cow, yet she is the source of the finest working oxen, perhaps in the world. The Devons have also a claim to quick feeding, and a maturity much earlier than any unimproved breed. They are said to be the Aboriginal breed of Great Britain, and are there highly valued, and make most delicate beef when fatted. On lands of the above character, the cross between the Devon bull and the native cow would no doubt succeed admirably. These two varieties, the Improved Short Horns and the Devons belong to different purposes, and both are extremely valuable in the situations to which they are adapted. The Galloways are also a breed well fitted, by reason of their hardihood, kindly feeding, and much endurance to the severity of our winters, and the misery of our barn yards. They are a very handsome breed of cattle, straight and broad in the back, round in the barrel, and full in the rib, in which points they will compare with any breed. They lay their fat upon the most valuable parts, and though the feed be short, and the winters long, they will do well and thrive. The Ayreshire breed are also said to feed kindly and profitably, in districts where others could not be made to thrive at all, uniting to a greater degree than any other breed, the supposed incompatible properties of yielding a great deal of milk and beef.—They are new comers, but bring with them a good report, and if they maintain the same excellent character for the dairy in our warmer climate, which they have gained at home, they may become the favorite stock of the country, though it is more than probable that when transplanted from their moist climate and poor soil to our warmer climate and richer soil, they will lose their superiority as milkers, and begin to accumulate flesh. The Hereford and Holstein breeds are partially known, in this country, and what little is known is not much to their credit. The former is no milker, the latter gives abundance of milk, but it is very poor; they are slow to feed, slow to move, and yet slower in attaining maturity. The Alderney, though ill-shaped, is emphatically a better cow than either of the two last mentioned, always poor herself to enrich the milk pail, and though a great feeder yields very little milk; that milk, however, is of an extraordinary excellent quality, and gives more butter than can be obtained from any other cow. The above enumeration contains the description of all the breeds of cattle that we are familiar with, either personally or by reputation, that have been imported into the country for the purpose of crossing with our native stock. Of them all, your committee are of opinion, that the Improved Short Horns, for the rich and fertile valleys, and the North Devons, for the lighter but sweeter feed of the uplands, are the most profitable of all to cross with our native stock. They have been the longest in the country, and experience has proved their worth. The Galloways are probably next in importance, and the day may yet come when the hills of Franklin and Essex, and the whole Northern Frontier, for which they are admirably calculated, may be covered with them. It only remains to conclude this report, and in the words of a Lincolnshire farmer, we would say to those who are, or would be, engaged in the business of rearing stock of any description—"It should be an invariable rule to breed from small boned, straight backed, healthy, clean, kindly skinned, round bodied, and barrel shaped animals, with clean necks and throats, and little or no dew lap, carefully rejecting all those which may have heavy legs and roach backs, together with much appearance of offal."

W. A. S. NORTH,
Chairman of the Committee on Neat Stock.

Spring Wheat.

JUST received at the Rochester Seed Store, a further supply of genuine *Italian* and *Bald Siberian* Spring Wheat, both of which are highly recommended and of superior quality.

REYNOLDS & BATEHAM.

Feb. 17, 1838.